

In order to most efficiently resolve this problem, the consultation process would have to take place in shorter amount of time than would be required to list the species as Endangered by normal procedures. The emergency rule immediately implements the protective provisions of the Endangered Species Act of 1973, as amended, including the requirement that Federal agencies insure that their actions are not likely to jeopardize the continued existence of Endangered or Threatened species. The emergency rule will apply for 240 days, during which time the Service intends to prepare a final rule providing permanent Endangered status.

**DATES:** This emergency rule is effective on September 21, 1983 and expires on May 18, 1984.

**FOR FURTHER INFORMATION CONTACT:** Mr. David Wesley, Endangered Species Field Supervisor, U.S. Fish and Wildlife Service, 2724 Art Museum Drive, Jacksonville, Florida 32207 (904/791-2580 or FTS 946-2580).

**SUPPLEMENTARY INFORMATION:**

**Background**

The Key Largo woodrat (*Neotoma floridana smalli*) was described by Sherman (1955). It is the southernmost subspecies of woodrat in the U.S., and is separated by a 150-mile gap from other Florida woodrat (*N. f. floridana*) populations. The Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) was described by Schwartz (1952). Both the woodrat and cotton mouse are endemic to Key Largo, Monroe County, Florida. Both species were introduced to Lignum Vitae Key, Monroe County, Florida in 1970. The woodrat has apparently flourished on Lignum Vitae Key, a State preserve, and may have reached the carrying capacity of the available habitat on this 90-hectare (220-acre) key. The status of the cotton mouse on Lignum Vitae Key is unknown. The Florida Department of Parks and Recreation has considered relocating the woodrat and cotton mouse from Lignum Vitae Key because neither species is native there. No such translocation efforts are presently planned, however.

On May 19, 1980, Dr. Stephen R. Humphrey of the Florida State Museum, Gainesville, Florida, petitioned the Service to add the Key Largo woodrat and cotton mouse to the U.S. List of Endangered and Threatened Wildlife, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The petition included a status report prepared under contract to the Florida Game and Fresh Water Fish Commission and partly financed by

funds provided through Section 6 of the Endangered Species Act. Portions of the report were recently published (Barbour and Humphrey, 1982). In the Federal Register of July 28, 1980 (45 FR 49961-49962), the Service published a notice of petition acceptance and status review, and announced its intention to propose listing the two Key Largo rodents.

The upland areas which the woodrat and cotton mouse inhabit on north Key Largo reach an elevation of about 4 meters (13 feet). The uplands support a rich biota, including many rare plant species. The climax vegetation type is a hardwood hammock forest with close floristic affinities to the West Indies. The hammocks are restricted to upland areas because they do not tolerate the intrusion of salt water in the tidal lowland areas.

Species associated with the north Key Largo hammocks include the Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*), federally Threatened; and several Florida State-listed plant species: tamarindillo (*Acacia choriophylla*), powdery catopsis (*Catopsis berteroniana*), prickly apple (*Cereus gracilis* var. *simpsonii*, a cactus that the Service presently has under review (45 FR 82496) for possible listing as Endangered or Threatened), silver palm (*Coccothrinax argentata*), lignum-vitae (*Guaicum sanctum*), inkwood (*Hypelate trifoliata*), mahogany mistletoe (*Phoradendron rubrum*), and brittle thatch palm (*Thrinax microcarpa*).

Tropical hardwood hammocks develop a closed canopy when they are mature, providing a more moderate, humid environment than the surrounding habitats. The Key Largo woodrat and cotton mouse are restricted to these hammocks. Tropical hardwood hammocks were originally found from Key West northward into the southern peninsula of Florida. Many of the hardwood hammocks on the peninsula, however, have been destroyed due to human activities. This habitat is one of the most limited and threatened ecosystems in Florida. The hammocks of north Key Largo represent some of the largest remaining tracts of this vegetation type.

Hersh (1981) studied the ecology of the woodrat on north Key Largo. Woodrat densities on the 5.25-hectare (13-acre) study area varied between 2 and 2.5 woodrats per hectare (0.8-1.0 woodrats per acre). Mean home range was 0.2368 hectares (0.6 acres). Each woodrat used several stick nests (about 5.6 nests per woodrat). Woodrats fed on leaves, buds, seeds, and flowers of a variety of plants.

**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**50 CFR Part 17**

**Endangered and Threatened Wildlife and Plants; Emergency Determination of Endangered Status for the Key Largo Woodrat and Key Largo Cotton Mouse**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Emergency rule.

**SUMMARY:** The Service makes an emergency determination of Endangered status for the Key Largo woodrat and Key Largo cotton mouse, two small mammals restricted to tropical hardwood hammock forest on northern Key Largo, Monroe County, Florida. They are jeopardized by the loss of their forest habitat to residential and commercial development. An emergency determination is necessary to allow full consideration of the welfare of these species during Service consultation on a loan from the Rural Electrification Administration to the Florida Keys Electric Cooperative. The loan is for construction of a substation that would greatly increase electrical delivery capability on Key Largo, resulting in accelerated habitat loss.

Barbour and Humphrey (1982) found that the woodrat and cotton mouse were most abundant in mature hammocks and were rare or absent in young or recovering hammocks. Cotton mouse density was estimated to be 21.8 mice per hectare (8.8 per acre) in mature forest but only 1.2 per hectare (0.5 per acre) in successional forest. About 466 hectares (1,150 acres) on north Key Largo were occupied by woodrats. The average density of nests was 7.7 per hectare (3.1 per acre). The total woodrat population was estimated to be 654 individuals.

Both studies recommended protection of hammock forest habitat if the Key Largo woodrat and cotton mouse were to survive on north Key Largo. Habitat loss has continued, however, and accelerated destruction is likely to occur without emergency protective measures.

#### Summary of Factors Affecting the Species

Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 amendments to the Act) set forth the procedures for adding species to the Federal lists. The Secretary of the Interior shall determine whether any species is an Endangered or a Threatened species due to one or more of the five factors described in Section 4(a)(1) of the Act. These factors and their application to the Key Largo woodrat and cotton mouse are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The native range of the Key Largo woodrat and cotton mouse is Key Largo, Monroe County, Florida. Both species are dependent on tropical hardwood hammock forest. The rodents are presently found only on 1,150 acres of the northern portion of Key Largo, where most of the remaining hardwood hammocks occur. Increased protection for mangroves and wetlands in Florida has moved development pressure to the much more limited upland areas where tropical hammocks occur. The remaining hammocks of north Key Largo are the proposed site for a large number of residential developments. Intensive development in the Keys generally results in destruction of the hammock ecosystem, even though individual large trees may be preserved. The Florida Keys Aqueduct Authority is presently completing a new pipeline to the Keys. A spur of the pipeline now extends into north Key Largo, and increased availability of water is expected to accelerate the rate of

residential, commercial, and recreational development.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not applicable.

C. *Disease or predation.* Not applicable.

D. *The inadequacy of existing regulatory mechanisms.* Monroe County Ordinance 18-1975 for Site Clearing and Tree Protection recognizes the uniqueness and fragility of the tropical hardwood hammocks in the Keys and regulates clearing of the hammocks. Numerous violations of the Ordinance have occurred, however, and penalties have been small enough that they are not necessarily a deterrent to potential violators. More importantly, the ordinance does not specifically protect the integrity of hammocks, but instead emphasizes the protection of individual large trees. The Key Largo woodrat and cotton mouse are considered endangered by the State of Florida (Chapter 39-27.03 of the Florida Administrative Code), but this legislation does not protect the habitat of these species.

E. *Other natural or manmade factors affecting its continued existence.* The Key Largo woodrat may be at the carrying capacity of the available habitat on Lignum Vitae Key. The status of the cotton mouse on this key is presently unknown. Should these species be removed from Lignum Key, where they are not native, it would be difficult to locate sufficient suitable habitat to introduce them into.

#### Critical Habitat

Section 4(b)(6)(C) of the Endangered Species Act of 1973, as amended, states in part that a final regulation designating Critical Habitat of an Endangered Species shall be published concurrently with the final regulation implementing the determination that such species is Endangered, unless the Secretary deems that it is essential to the conservation of such species that the regulation implementing such determination be promptly published. In the case of the Key Largo woodrat and cotton mouse, the process of delineating the precise boundaries of Critical Habitat would extend beyond the period in which this emergency rule must be published (see "Reasons for Emergency Determination," below). Therefore, no Critical Habitat is designated in the emergency rule. It is intended, however, to include a Critical Habitat designation in the permanent final rule determining Endangered status for the Key Largo woodrat and cotton mouse.

#### Reasons for Emergency Determination

On June 27, 1983, the Rural Electrification Administration (REA) submitted to the U.S. Fish and Wildlife Service a request for immediate initiation of formal consultation on a proposed loan to the Florida Keys Electric Cooperative (FKEC) for construction of a substation to provide increased electrical delivery on northern Key Largo. Such consultation is required by Section 7 of the Endangered Species Act, as amended, because of the presence of two federally listed species, the Threatened Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*) and the Endangered American crocodile (*Crocodylus acutus*), which may be affected by the project. Subsection 7(a)(2) requires consultation to insure that Federal actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of their Critical Habitat.

The proposed electric delivery system, which could serve up to 6,000 new residential units, would probably have even greater adverse effects on the Key Largo woodrat and cotton mouse, which hitherto have not been listed. These two species occur exclusively in upland hardwood hammocks, which are prime targets of development. Even though a portion of the habitat of these species lies within the authorized boundaries of the approved Crocodile Lake National Wildlife Refuge, little of the upland habitat has been acquired so far, and future acquisitions are expected to proceed slowly. Moreover, most habitat of these species is outside the refuge boundaries. Increased availability of electric power would likely result in accelerated residential and commercial development both within and outside the authorized refuge boundaries. Consequently, a substantial part of the habitat of the Key Largo woodrat and cotton mouse would probably be lost, and the survival of these species would be jeopardized.

If the Key Largo woodrat and cotton mouse were not on the U.S. List of Endangered and Threatened Wildlife, their welfare could not initially be given full consideration in the consultation process relative to the loan from the REA to the FKEC. If these two species were to be only proposed for listing, they would be subject to Subsection 7(a)(4) of the Endangered Species Act, which requires that Federal agencies informally "confer" on actions likely to jeopardize the continued existence of proposed species. Unlike the protection afforded listed species, this Subsection

does not legally prohibit such actions, once informal conferral has taken place, and does not prohibit agencies from making irreversible or irretrievable commitments of resources with respect to such actions. Thus, proposed species are afforded no substantive protection pursuant to the Act. Once the species were placed on the List, however, the prior consultation with REA on the loan to FKEC would have to be reinitiated, resulting in the loss of money and planning time invested in the substation project.

As set forth in Section 4 of the Endangered Species Act, the normal procedure for adding a species to the List of Endangered and Threatened Wildlife involves publication of a proposed regulation not less than 90 days before the effective date of the final listing. Section 7, however, requires that the consultation process relative to Federal actions be completed within 90 days of initiation, unless there is mutual agreement on some other time period. There appears to be no possibility of extending the consultation (initiated June 27, 1983) relative to the loan for construction of an electric substation on northern Key Largo. Therefore, in order to insure that the welfare of the Key Largo woodrat and cotton mouse is considered in such consultation, and that their survival is not jeopardized by Federal actions, an emergency rule is necessary.

#### Available Conservation Measures

Endangered Species regulations already published in Title 50, Section 17.21 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered wildlife species. These prohibitions, in part, will make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale any Key Largo woodrat or cotton mouse in interstate or foreign commerce. It also will be illegal to possess, sell, deliver, carry, transport, or ship any such wildlife which was illegally taken. Certain exceptions will apply to agents of the U.S. Fish and Wildlife Service and State Conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving Endangered wildlife under certain circumstances. Regulations governing such permits are codified at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, for incidental take in accordance with a comprehensive conservation program, and to enhance the propagation or

survival of the species. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship which would be suffered if such relief were not available.

Subsection 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as Endangered or Threatened. This rule requires Federal agencies to satisfy their statutory obligations with respect to the Key Largo woodrat and cotton mouse. Since these two species are now being added to the List of Endangered and Threatened Wildlife, Federal agencies will be immediately required to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of these species. Activities that now may be affected in this regard include the loan by the REA for development of an electrical substation, as described above.

Another possible Federal involvement in the upland areas of the north Key Largo area would be the flood insurance provided by the Federal Emergency Management Agency (FEMA). Monroe County regulations qualify the area under the National Flood Insurance Program administered by this agency. Insurance is provided only for completed structures. Should the program be restricted on north Key Largo, increased risk or increased insurance costs could result. Development would be less attractive in the area.

Due to the high-cost, luxury type of development planned for north Key Largo, future loans by such Federal agencies as the Federal Housing Administration, Veterans Administration, and Small Business Administration are not considered likely. If loans were sought from these agencies, however, their availability might be affected by this rule. Some increases in costs, e.g., higher interest rates, could result. Private development would probably continue on north Key Largo, albeit at a slower rate without Federal loan assistance.

The U.S. Fish and Wildlife Service is presently acquiring lands on north Key Largo for the Crocodile Lake National Wildlife Refuge. The projected size of the refuge is about 7,000 acres. At present, 203 acres have been acquired with an additional 450 acres planned for acquisition in 1983. The projected refuge boundaries include some areas occupied by the Key Largo woodrat and cotton mouse. Service management would preserve the hardwood hammock vegetation on these uplands. Few if any

increased costs to the refuge would result from this listing action.

A previous Service consultation pursuant to Section 7 of the Endangered Species Act occurred in relation to the Farmers Home Administration (FmHA) funding of the Florida Keys Aqueduct Authority's (FKAA) new aqueduct on the Florida Keys. The Service's concern was that the new pipeline would encourage development, thereby adversely affecting listed species. FmHA entered into consultation with the Fish and Wildlife Service on February 4, 1980. The consultation involved the Endangered American crocodile and the Threatened Schaus swallowtail butterfly on north Key Largo. A biological opinion, issued by the Service on May 29, 1980, indicated that these species would be jeopardized by the project. FmHA accepted, as a condition of its loan, a requirement to restrict water delivery on north Key Largo, thus avoiding a violation of Subsection 7(a)(2) of the Endangered Species Act. The areas excluded from water delivery were within the boundaries of the Crocodile Lake National Wildlife Refuge as well as uplands of several sections of land east of the refuge. About 45 percent of the total Key Largo woodrat and cotton mouse population on north Key Largo occurs in hammocks denied water in conformity with the existing biological opinion. Much of the most densely occupied habitat, however, lies outside these areas. Since the FmHA is not involved with the construction or operation of the pipeline, no future Federal involvement with this project is anticipated.

This rule will also bring Sections 5 and 6 of the Endangered Species Act into effect with respect to the Key Largo woodrat and cotton mouse. Section 5 authorizes the acquisition of lands for the purpose of conserving Endangered and Threatened species. Pursuant to Section 6, the Fish and Wildlife Service may grant available funds to the State of Florida for management actions aiding the protection and recovery of the two Key Largo species.

Listing the Key Largo woodrat and cotton mouse as Endangered will provide for development of a recovery plan for these mammals. Such a plan would draw together the State and Federal agencies having responsibility for conservation of the two species. The plan would establish an administrative framework, sanctioned by the Act, for agencies to coordinate activities and cooperate with each other in conservation efforts. The plan would set recovery priorities and estimate the

costs of the various tasks necessary to accomplish them. It would assign appropriate functions to each agency and a time frame within which to complete them.

#### National Environmental Policy Act

A draft Environmental Assessment will be prepared when the Key Largo woodrat and cotton mouse are formally proposed for permanent addition to the U.S. List of Endangered and Threatened Wildlife. At the time such a rule is made final, a determination will be made as to whether this is a major Federal action that would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (implemented at 40 CFR Parts 1500-1506).

For the reasons described above, the Department has determined that the listing responds to an emergency situation, and that the procedures

prescribed by Executive Order 12291 do not apply. Applicable provisions of the order will be followed during the development of any permanent final rule pursuant to 16 U.S.C. 1531 *et seq.*

#### Author

The primary author of this rule is Dr. Michael M. Bentzen, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207 (904/791-2580).

#### References

Barbour, D.B., and S.R. Humphrey. 1982. Status and habitat of the Key Largo woodrat and cotton mouse (*Neotoma floridana smalli* and *Peromyscus gossypinus allapaticola*). J. Mamm. 63:144-148.

Hersh, S.I. 1981. Ecology of the Key Largo woodrat (*Neotoma floridana smalli*). J. Mamm. 62:201-206.

Schwartz, A. 1952. Three new mammals from southern Florida. J. Mamm. 33:381-385.

Sherman, H.B. 1955. Description of a new race of woodrats from Key Largo, Florida. J. Mamm. 36:113-120.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

#### Regulation Promulgation

#### PART 17—[AMENDED]

Accordingly, until May 18, 1984, Part 17, Subchapter B of Chapter I, Title 50 of the U.S. Code of Federal Regulations, is amended as follows:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 98 Stat. 1411 (16 U.S.C. 1531, *et seq.*).

2. Section 17.11(h) is amended by adding the following, in alphabetical order, to the List of Endangered and Threatened Wildlife under "Mammals":

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Mouse, Key Largo cotton	<i>Peromyscus gossypinus allapaticola</i>	U.S.A. (Florida)	Ende	E		N/A	N/A
Woodrat, Key Largo	<i>Neotoma floridana smalli</i>	do	do	do		do	Do

Dated: September 15, 1983.

J. Craig Potter,

Assistant Secretary for Fish and Wildlife and Parks.

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